

- 39 -

ABSTRACT OF THE DISCLOSURE

A high efficiency, low distortion switching mode power amplifier for telecommunication applications includes an analog to binary digital converter and a class S amplifier terminated by an output filter/matching network capable of operation over one or more frequency bands. The modulator may be connected to the class S amplifier with a fibre optic link. This construction can provide a low-distortion connection to remote antennas. Multiple modulators and amplifiers can be multiplexed over the fibre link to support a multiple sector antenna on a cell site or multiple transmitter elements on a phased array antenna.